

CLAIMS:

1. A tubular reactor, for catalyzing reaction of hydrogen and a gaseous oxidant, the tubular reactor comprising:

5 an elongated housing, a first inlet for a gaseous fuel and a second inlet for a gaseous oxidant, both first and second inlets being provided at one end of the elongated housing and an outlet at the other end of the housing; and

a catalyst formed from a material adapted to promote catalytic combustion of the fuel and the oxidant, being formed into an elongated body substantially filling the elongated housing and being porous, whereby, in use, the catalyst promotes combustion between the fuel and the oxidant to generate heat and moisture, whereby a heated and humidified gas flow exits through the outlet.

2. A tubular reactor as claimed in claim 1, wherein the housing and the body of the catalyst are both generally cylindrical and have a length substantially longer than the diameter thereof.

3. A tubular reactor as claimed in claim 1 or 2, which includes, for the first and second inlets, fittings for connection to supply lines for fuel and the oxidant, and for the outlet, a fitting for connection to a conduit for receiving the heated, humidified gas flow.

4. A tubular reactor as claimed in claim 3, wherein the fittings for the first and second inlets, comprise a T-connector including 3 coupling flanges, one being connected to the tubular housing and the other two flanges providing the first and second inlets, and the fitting for the outlet comprises a connector with a pair of flanges, one flange being connected to the tubular housing and the other flange of the connector forming the outlet.

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